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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,570	12/05/2003	Sung-Su Jung	8734.268.00 US	7322

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EXAMINER	
LIN, JAMES	

ART UNIT	PAPER NUMBER
1792	

MAIL DATE	DELIVERY MODE
04/24/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/727,570	JUNG ET AL.	
	Examiner	Art Unit	
	Jimmy Lin	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/20/08*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *1-11* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :3/16/04,4/11/06,1/23/07,8/14/07,2/26/08.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group II, claims 12-16 in the reply filed on 2/20/2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 1-11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 2/20/2008.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 13 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 requires M x N number of syringes, which does not correspond to N number or M number of syringes as required in the parent claim. The claim is indefinite as to how many syringes are required.

Claim 16 requires a first and second size of image display parts, wherein the first and second sizes are different, while parent claim 12 requires an image display having a matrix of M lines x N columns. As can be seen from Figs. 5A-5D, the two different sizes would entail a different number of image displays formed in one line, thereby creating two different numbers of N columns. It is indefinite as to whether the number of N columns is based on the first size of image display parts or the second size of image display parts.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto et al. (U.S. Publication No. 2001/0013920) and Hirokazu (JP 60-003609, listed in the IDS filed 2/26/2008).

Hashimoto teaches a method of making a liquid crystal display panel (abstract). A substrate 21a is placed on a table 31, and liquid crystal is injected onto the substrate through a nozzle of a syringe ([0050]; Fig. 14). The syringe can be attached to a robot arm and the robot arm moves while the substrate is fixed [0153].

Hashimoto does not explicitly teach that the image display is formed of M lines x N columns. However, Hirokazu teaches that it was extremely well known in the art of making LCDs to form a plurality of image displays on a single glass substrate (abstract; Fig. 1). The image displays are arranged such that multiple lines and columns are formed on the glass substrate. Because Hirokazu teaches that such a substrate configuration was operable in the art, it would have been obvious to one of ordinary skill in the art at the time of invention to have formed multiple image displays in the configuration of M lines x N columns on the substrate of Hashimoto with a reasonable expectation of success. The selection of something based on its

known suitability for its intended use has been held to support a prima facie case of obviousness. Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945).

Hashimoto teaches that a single syringe can be used, but does not explicitly teach using a dispenser having M number or N number of syringes. However, it is well settled that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced (see MPEP 2144.04.VI.B.). One of ordinary skill in the art would have recognized that a plurality of syringes would have required less deposition time than a single syringe. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have used a plurality of syringes, including the number as claimed, in the deposition method of Hashimoto. One would have been motivated to do so in order to have increased deposition efficiency.

Claim 13: Hashimoto does not explicitly teach that sealant can be dispensed using a syringe. However, Hashimoto does teach that the sealant can be dispensed by any sort of method wherein the sealant is injected on the substrate through a nozzle [0046]. Hashimoto also teaches that a syringe can be used to inject material onto the substrate through the nozzle of the syringe [0050]. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of invention to have used the syringe of Hashimoto to inject the sealant onto the substrate with a reasonable expectation of success because Hashimoto teaches that the nozzle of the syringe is suitable for injecting a material onto an LCD substrate.

Hashimoto does not explicitly teach using M x N number of syringes to form the seal patterns. However, it is well settled that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced (see MPEP 2144.04.VI.B.). One of ordinary skill in the art would have recognized that using a syringe for every corresponding image display would have allowed for minimal deposition time. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have used M x N number of syringes in the method of Hashimoto with a reasonable expectation of success. One would have been motivated to do so in order to have maximized deposition efficiency.

Claim 14: The use of either M number or N number of syringes would have suggested forming at least one line or at least one column of seal patterns line by line or column by column, respectively.

Claim 15: Hashimoto does not explicitly teach that the syringes can be individually moved. However, the syringes can be moved for deposition and must necessarily require some sort of means to do so. Hashimoto does teach that a syringe can be connected to a robot arm. One of ordinary skill in the art would have recognized that connecting each syringe to an individual robot arm would have been an operable method to provide a moving means. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have attached each of the plurality of syringes of Hashimoto and Hirokazu to an individual robot arm in order to provide a means for moving the syringes with a reasonable expectation of success. The attachment of the syringes to individual robot arms would allow individual movement of the syringes.

Claim 16: Hirokazu teaches that the glass substrate can have image displays of different sizes. For example, the first line of the first size comprises of six display images while the second line of the second size comprises of eight display images (Fig. 2).

Hashimoto and Hirokazu do not explicitly teach a first group of syringes corresponding to a first size of image display parts and a second ground of syringes corresponding to a second size of image display parts. However, one of ordinary skill in the art would have recognized that the use a first set of syringes corresponding to the number of image displays in the first line and a second set of syringes corresponding to the number of image displays in the second line would have been operable because the use of a single set of syringes and the use of two sets of syringes would not have yielded unexpected results. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have used a first group of syringes and a second group of syringes corresponding to the first and second image displays of Hirokazu, respectively, with a reasonable expectation of success.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Lin whose telephone number is (571)272-8902. The examiner can normally be reached on Monday thru Friday 8AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jimmy Lin/
Examiner, Art Unit 1792

/Timothy H Meeks/
Supervisory Patent Examiner, Art Unit 1792